

REMARKS

I. Status of the Claims

Claims 1-4 and 6-20 are pending.

Claims 1-4 and 6-20 stand rejected.

Claims 3, 10, 12, 13, 15, 17 and 19 have been amended.

Claims 1-2, 5-9, 11, 14, 16, 18 and 20 have been canceled. No new matter has been added.

II. Rejections Under 35 U.S.C. § 103(a)

Claims 1-4 and 6-20 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,490,663 to Komori ("Komori"), and further in view of Funakoshi et al. (European Patent Application EP 0 903 271 A2) ("Funakoshi"). The Examiner states that Komori discloses all of the features of the claimed invention except for a delay portion. Applicants respectfully traverse the Examiner's rejection and reconsideration is respectfully requested.

Applicant submits that Komori, either alone or in combination with Funakoshi, does not teach or suggest the present invention. In particular, the invention of Komori essentially provides a check program for an electronic control apparatus, wherein the check program is present in a predetermined address in a storage area for storing a control program. The control program for a predetermined object is executed only after its presence has been previously confirmed by the check program, thus preventing erroneous operation when the processor attempts to execute a control program which is not present. The fact that the check program is set in a predetermined address is a remedy to the problem that arises when an application program changes in size due to a modification, hence changing the address of the data which indicates the presence or absence of the application program.

Applicant submits that Funakoshi provides a security device for a vehicle simply by generating a seed, which is a sort of random number that is transmitted from a vehicle control unit to a user side key unit. The user side key unit encodes the seed, using a predetermined encoding algorithm, to generate an authentication key. A vehicle control unit comparison is made between its own authentication key, generated using the same encoding algorithm, and the key transmitted from the user side key unit. When the two keys coincide, the security of the vehicle control unit is released to the proper owner of the user side key unit. The present application acknowledges all of these features as part of the background of the invention. See Specification page 2, line 13 to page 5, line 6. Funakoshi fails to teach or even suggest any technique whereby a program can be rewritten to an onboard electronic control apparatus at a factory while bypassing the standard delay time of 10 seconds or more, while still conforming to communication standard SAEJ2186 for preventing illicit rewrite.

Applicant further submits that the “free run timer” in paragraph 0028 of Funakoshi referenced by the Examiner is also acknowledged in the background of the invention of the present application. Page 3, lines 3-5 of the present Specification recite “the onboard electronic control apparatus begins measuring the elapse time from first step 501. i.e. from the IG power ON time.”

In contrast to Komori and Funakoshi, the present invention is a technique whereby data that may have been incompletely or improperly written to an electronic control system of a device at a factory can subsequently be rewritten at the factory. The method allows bypassing the time delay portion normally required for such rewrites while maintaining accepted security standards for the prevention of illicit tampering with an onboard program. This allows necessary program rewrites to take place at the factory without having to wait for a 10 second time delay to elapse, which would considerably decrease factory productivity, especially given the large number of vehicles for which this procedure is used. See Specification page 6, lines 1-5. Once the particular application program is successfully written to the electronic control apparatus, the security flag provided by the present invention is set, preventing any further rewrites without first allowing a delay time of 10 seconds to elapse, as required by communication standard SAEJ2186 for preventing illicit rewrite. See Specification page 6, lines 9-16.

Moreover, the Examiner agrees that Komori fails to disclose bypassing a delay portion and states that Komori does not even disclose a delay portion. In fact, although the Examiner cites to Funakoshi for this feature being obvious, as mentioned above, Funakoshi simply provides a free run timer for a security device that is counted until the ignition switch is changed over to 'off.' Funakoshi fails to even suggest bypassing the time delay normally required for particular rewrites while maintaining accepted security standards for the prevention of illicit tampering with an onboard program. In light of the foregoing, Applicants respectfully submit that the present invention is not taught or suggested by Komori, either alone or in combination with Funakoshi. Applicants respectfully request that the rejection be withdrawn.

Further, Applicant asserts that the question as to whether a "delay portion," "delay time," or "time out" is well-known and widely adopted in the art is immaterial, since the aforementioned communication standard SAEJ2186 for preventing illicit rewrite prescribes a delay time of 10 seconds or more for the first access after the car is powered on by operating the ignition.

Applicants have amended claims 3, 10, 12, 13, 15, 17 and 19 to clarify the delay time bypass and security flag features for rewrite operations as discussed previously. See Specification page 6, line 9 to page 14, line 3 for further clarification. The amendments do not add any new limitations and are not made for reasons relating to patentability.

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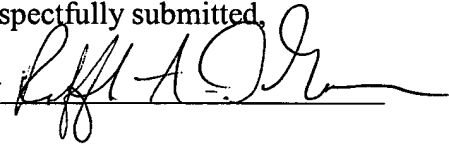
Docket No.: 09661/000L379-US0

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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